IN THE CLAIMS

Please amend the claims as follows:

1. (Currently Amended) An optical information storage medium comprising:

a carrier substrate;

a reflective information layer being positioned on the carrier substrate and comprising at least a first layer of a first inorganic material in a first structural phase, and at least a second layer of at least a second inorganic material in at least a second structural phase; and

alloy inclusions being formed in the information layer upon exposure to a first electromagnetic radiation and having a structural phase comprising a mixture of the first material in the first structural phase and the at least second material in the at least second structural phase,

wherein the optical properties of the alloy inclusions are different from the optical properties of the as-deposited information layer so that a modulation in electromagnetic radiation reflected from the alloy inclusions and from an area comprising the as-deposited information layer, respectively, is provided in response to a second electromagnetic radiation being emitted towards the optical information storage medium to provide a read-out signal,

wherein the storage medium further comprises:

at least one additional layer ~~in contact with~~directly adjacent the carrier substrate and positioned between the carrier substrate and the at least first layer, the at least one additional layer comprising at least one sub-layer being a metal,

and wherein said first electromagnetic radiation and said second electromagnetic radiation enter said optical information storage medium opposite to said carrier substrate.

2. (Previously Presented) The optical information storage medium as claimed in claim 1, wherein the inorganic materials at least comprises materials being selected from the group consisting of the pairs: As-Pb, Bi-Cd, Bi-Co, Bi-In, Bi-Pb, Bi-Sn, Bi-Zn, Cd-In, Cd-Pb, Cd-Sb, Cd-Sn, Cd-Ti, Cd-Zn, Ga-In, Ga-Mg, Ga-Sn, Ga-Zn, In-Sn, In-Zn, Mg-Pb, Mg-Sn, Mg-Ti, Pb-Pd, Pb-Pt, Pb-Sb, Sb-Sn, Sb-Ti, Se-Ti, Sn-Ti, and Sn-Zn.

3. (Previously Presented) The optical information storage medium as claimed in claim 1, wherein the inorganic materials at least comprises materials being selected from the group consisting of the pairs: Bi-Co, Bi-In, Bi-Pb, Bi-Sn, Bi-Zn, Ga-In, Ga-Sn, In-Sn, In-Zn, Mg-Sn, Sb-Sn, Sn-Ti, and Sn-Zn.

4. (Previously Presented) The optical information storage medium as claimed in claim 1, wherein the inorganic materials at least comprises the combination of Bi-In, Bi-Sn, In-Sn.

5. (Previously Presented) The optical information storage medium as claimed in claim 1, wherein each inorganic material has a complex refractive index n ± ik and wherein the second inorganic material is selected to have a real part of the refractive index lower than the real part of the refractive index of the first material and an imaginary part of the refractive index higher than the imaginary part of the refractive index of the first material.

6. (Previously Presented) The optical information storage medium as claimed in claim 1 wherein the first inorganic material forming the first layer is Bi and the second inorganic material forming the second layer is In or Sn, or wherein the first inorganic material is Sn and the second inorganic material is In.

7. (Previously Presented) The optical information storage medium as claimed in claim 1, wherein the thickness of the first and second layers are selected so that an alloy formed by melting and solidifying of at least a part of the first and second layers has a substantially eutectic composition.

8. (Cancelled).

9. (Previously Presented) The optical information storage medium as claimed in claim 1, wherein the alloy or the as-deposited information layer are substantially transparent to the second electromagnetic radiation emitted towards the medium.

10. (Previously Presented) The optical information storage medium as claimed in claim 9, wherein the at least one additional layer is adapted to reflect, absorb or diffuse the second electromagnetic radiation being emitted towards the additional layer.

11. (Previously Presented) The optical information storage medium as claimed in claim 9, wherein the at least one additional layer comprises at least one sub-layer comprising a dielectric material.

12. (Cancelled).

13. (Previously Presented) The optical information storage medium as claimed in claim 9, wherein the at least one additional layer comprises at least one transparent spacer layer.

14. (Previously Presented) The optical information storage medium as claimed in claim 1, wherein the medium further comprises a protective cover layer.

15. (Previously Presented) The optical information storage medium as claimed in claim 1, wherein the modulation in reflected electromagnetic radiation between an area comprising the alloy and an area comprising the as-deposited layer is larger than 70%.

16. (Previously Presented) The optical information storage medium as claimed in claim 1, wherein the modulation is an intensity modulation or a phase modulation.

17. (Previously Presented) The optical information storage medium as claimed in claim 1 wherein the medium is compatible with CD and DVD standards.

18. (Previously Presented) The use of a medium as claimed in claim 1 in an optical information reading and/or recording device.

19. (Currently Amended) An optical storage information medium comprising:

a carrier substrate,

a first recording stack comprising

a reflective information layer comprising at least a first layer of a first inorganic material in a first structural phase, and at least a second layer of at least a second inorganic material in at least a second structural phase, and at least one additional layer ~~in contact with~~directly adjacent the carrier substrate and positioned between the carrier substrate and the at least first layer, the at least one additional layer comprising at least one sub-layer being a metal,

alloy inclusions being formed in the information layer and having a structural phase comprising a mixture of the first

material in the first structural phase and the at least second material in the at least second structural phase,

a separation layer,

a second recording stack substantial identical to the first recording stack,

and wherein said first electromagnetic radiation and said second electromagnetic radiation enter said optical information storage medium opposite to said carrier substrate.

20. (Currently Amended) A method for manufacturing an optical information storage medium, the method comprising the steps of:

providing a carrier substrate,

providing a reflective information layer by depositing at least a first layer of a first inorganic material in a first structural phase on the carrier substrate, and depositing at least a second layer of at least a second inorganic material in a second structural phase on the first layer,

providing at least one additional layer ~~in contact with~~directly adjacent the carrier substrate and positioned between the carrier substrate and the at least first layer, the at least one additional layer comprising at least one sub-layer being a metal,

the at least first and second inorganic materials being selected so that a structural phase being formed by melting and solidification of at least a part of the information layer provides alloy inclusions having a structural phase comprising a mixture of the first material

in the first structural phase and the second material in the second structural phase,

and wherein a electromagnetic radiation for reading and/or writing to said optical information storage medium enters said optical information storage medium opposite to said carrier substrate.

21. (Previously Presented) The method as claimed in claim 20, further comprising the step of exposing in a predetermined pattern the information layer to a first electromagnetic radiation so as to form alloy inclusions in the exposed information layer.

22. (Previously Presented) An optical information storage medium being provided by the method as claimed in claim 20.

23. (Previously Presented) A method for optically reading an optical information storage medium as claimed in claim 1, the method comprising the steps of:

emitting an electromagnetic radiation towards the optical information storage medium,

detecting a phase or intensity modulation in electromagnetic radiation reflected from the optical information storage medium in response to the incoming electromagnetic radiation,

so that a pattern of alloy inclusions in the as-deposited information layer is provided by the detected phase or intensity modulation.